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ENTOMOLOGY.—*Records of Argynnis diana and of some other butterflies from Virginia.*¹ AUSTIN H. CLARK, U. S. National Museum, and CARROLL M. WILLIAMS, University of Richmond.

The great diversity of geographic conditions in Virginia is reflected in widely varying faunal conditions in different portions of the State. The low-lying eastern portion is a northeasterly extension of the Lower Austral life zone. The mountains in the west are characterized by a southwesterly extension of the Transition zone, with their highest summits, in the southwest, capped by Canadian "islands." Between the Lower Austral and Transition zones is a narrower strip of Upper Austral not very clearly differentiated—so far as the butterflies are concerned—from the Lower Austral.

The Lower Austral zone in Virginia presents some curious anomalies. Perhaps the most interesting of these anomalies is the occurrence in localized areas of species of butterflies characteristic of the Transition zone. Such species are *Argynnis diana*, *Satyroides eurydice*, and the typical form of *Atrytone dion*, which seem quite out of place on the hot coastal plain. *Argynnis cybele*, common in the Upper Austral and Transition zones, also occurs here.

In these same areas *Enodia creola* is widespread and locally common, and *Amblyscirtes carolina* is almost everywhere present, though apparently never very numerous. *Enodia portlandia* and *Amblyscirtes textor* also are common here, but both of these range eastward to the sea.

Atrytone dion dion occurs in the cool boggy hollows between the sand dunes west of Cape Henry; the southern form, *A. d. alabamiae*, occurs further to the northward, in the Dahl swamp in Accomac County. The other species are found, in more or less widely separated localities, along the western border of the Dismal Swamp and in and

¹ Received March 2, 1937.

near the swamps bordering the Blackwater and the Meherrin rivers.

We have thought it advisable at this time to call attention to this curious feature in the distribution of butterflies in Virginia in the hope that others may be stimulated to undertake investigations in this region. A very large number of records will be necessary before this and other anomalies in the distribution of the butterflies in the Virginian coastal plain can be properly interpreted.

Through the courtesy of a number of our colleagues we are privileged to include their records with our own. We are under special obligations to Prof. Ellison A. Smyth, Jr., of Salem (formerly of Blacksburg), Va.; to Prof. Lorande Loss Woodruff of Yale University, New Haven, Conn.; to Dr. G. W. Rawson, of Detroit, Mich.; to Mr. Herman J. Erb, of Ozone Park, N. Y.; to Mr. C. C. Walton of Richmond, Va.; and to Mr. W. Herbert Wagner, of Washington, D. C.

Argynnis diana.—The male of *Argynnis diana* was described and figured by Pieter Cramer in 1779. The locality he gave for his specimen was "Virginia."

The species was not again recorded from Virginia until 1895 when Prof. Ellison A. Smyth, Jr., wrote that it occurred in Montgomery County and "along the Blue Ridge," and in 1896 when Dr. Henry Skinner said that "the females found in eastern Tennessee, western North Carolina and southern Illinois are larger than those found in the mountains of Virginia."

In 1899 Sherman Denton mentioned its occurrence in "Western Virginia." In 1916 William C. Wood recorded it from Camp Craig, near Blacksburg, and Professor Smyth recorded it from Blacksburg and said that he had found it in Montgomery, Washington, and Giles Counties.

In 1934 and 1935 the senior author recorded it from Apple Orchard mountain in Bedford County.

The locality from which came Cramer's specimen still remained a mystery, for all the later records are from the mountains—territory but little explored in Cramer's time.

This butterfly has a much wider range in Virginia than one would be led to suppose from the few published records. It even occurs on the coastal plain. During the past summer the junior author took it south of Zuni and southeast of New Bohemia in the vicinity of the Blackwater river, and presumably it occurs elsewhere in this region.

Its occurrence here in the long settled portion of Virginia would explain satisfactorily how it happened that Cramer was able to secure a specimen, and we believe that eastern Virginia should be regarded as the type locality of the species.

The localities from which *Argynnis diana* is known in Virginia are:

BATH COUNTY: Warm Springs (G. W. Rawson); Hot Springs (Col. Wirt Robinson). ALLEGHANY COUNTY: Clifton Forge, July 5, 1936 (C. C. Walton). GILES COUNTY: (E. A. Smyth, Jr., 1916); Mountain Lake, July 1936 (L. L. Woodruff). BLAND COUNTY: Effna, July 19, 1936 (A. H. and L. F. Clark). DICKENSON COUNTY: Fremont, July 18, 1936 (A. H. and L. F. Clark). WASHINGTON COUNTY: (E. A. Smyth, Jr., 1916); Damascus, July 13, 1936 (A. H. and L. F. Clark); Konnarock, July 13, 1936 (A. H. and L. F. Clark). SMYTH COUNTY: Iron Mountain, July 10, 1936 (A. H. and L. F. Clark); Elk Gardens (Miss Umbarger); below Elk Gardens, July 11-13, 1936 (A. H. and L. F. Clark). PATRICK COUNTY: Blue Ridge Mountain, near Lovers' Leap, September 1, 1936 (A. H. and L. F. Clark). MONTGOMERY COUNTY: (E. A. Smyth, Jr., 1895, 1916); Blacksburg (E. A. Smyth, Jr., 1916); Camp Craig, near Blacksburg, taken by C. Harvey Crabill in August, 1914 (Wood, 1916); Poverty Hollow, near Blacksburg, 1933 (H. J. Erb). ROANOKE COUNTY: Salem (E. A. Smyth, Jr.). BEDFORD COUNTY: Apple Orchard Mountain (A. H. Clark, 1934, 1935). CHESTERFIELD COUNTY: (C. M. Williams). PRINCE GEORGE COUNTY: Southeast of New Bohemia, July 28, 1936 (C. M. Williams). ISLE OF WIGHT COUNTY: South of Zuni, August 22, 1936 (C. M. Williams). *Indefinite records*: Along the Blue Ridge (E. A. Smyth, Jr., 1895); Mountains of Virginia (Skinner, 1896); Western Virginia (= ? West Virginia) (Denton, 1899); Virginia (Cramer, 1779).

Although this butterfly is widely distributed over the state it is very local, and in the places where it is found it occurs as a rule only in small numbers. Its favorite haunts are steep damp slopes and ravines where it keeps largely in the woods unless lured to the roadsides or into the open by the flowers of milkweed or ironweed.

Argynnis cybele.—This species, common in the piedmont region and in the mountains, was found south of Zuni, Isle of Wight County, on September 6, 1936 (A. H. and L. F. Clark).

Enodia creola.—This butterfly proves to have a fairly extensive range in eastern Virginia, flying usually, though not always, with *E. portlandia*. Unpublished records are: Near New Bohemia, Prince George County, June 22, 1936 (G. W. Rawson and W. H. Wagner); near Petersburg, Dinwiddie County, June 25, 1936 (C. M. Williams); near Zuni, Isle of Wight County, September 6, 1936 (A. H. and L. F. Clark); Emporia, Greensville County, August 19, 1936 (C. M. Williams). We have noticed, independently, that both this species and *E. portlandia* are invariably associated with the cane (*Arundinaria gigantea*) which we therefore believe is their food plant in eastern Virginia. Both species are curious in being normally more or less active in the evening until it becomes too dark to see them.

Satyrodes eurydice.—Unpublished records for this species are: Langley, Fairfax County, July 5, 1936 (A. H. and L. F. Clark); Difficult Run, Fairfax County, September 19, 1936 (W. H. Wagner); Richmond, Henrico

County, July 1, 1936 (C. M. Williams); Quinton, New Kent County, August 30, 1936 (C. M. Williams); Burks Garden, Tazewell County, July 19, 1936 (A. H. and L. F. Clark); and near New Bohemia, Prince George County, June 22, 1936 (G. W. Rawson and W. H. Wagner); Emporia, Greenville County, September 3, 1936 (A. H. and L. F. Clark).

Neonympha areolatus var. *septentrionalis*.—Apparently widely distributed, though very local, in the coastal plain and lower piedmont; new records are: Lunenburg, Lunenburg County, September 2, 1936 (A. H. and L. F. Clark); north and south of Emporia, Greenville County, August 19, 1936 (C. M. Williams); Courtland, Southampton County, August 25, 1936 (C. M. Williams); north of Factory Hill, August 26, 1936 (C. M. Williams); south of Petersburg, Dinwiddie County, August 25, 1936 (C. M. Williams).

Cercyonis alope ? *pegala*.—Dark males from 45 to 49 mm in expanse lacking the posterior eye spot in the yellow band on the fore wing, agreeing with those from New Jersey that are regarded by some as representing a dwarf form of *pegala*, have been taken south of Petersburg, Dinwiddie County, July 18, 1936; North of Cypress Bridge, July 23, 1936; and northeast of Homeville, Sussex County, July 29, 1936. These were compared with several specimens from New Jersey and with one (recorded as *pegala*) from the District of Columbia.

Strymon liparops form *strigosa*.—This butterfly has been taken by Mr. Herman J. Erb near Blacksburg in July.

Pyrgus centaureae wyandot.—Unpublished records for the State are: Hayfield, Frederick County, April 28, 1935, frequent (A. H. and L. F. Clark); Sexton Shelter, Skyline Drive, May 26 and June 2, 1935, frequent (W. H. Wagner); Blacksburg, Montgomery County (E. A. Smyth, Jr.).

Pholisora hayhurstii.—Found along the western border of the Dismal Swamp near Suffolk, September 4, 1936 (A. H. and L. F. Clark).

Hesperia metea.—Taken at Richmond, April 26, 1936 (C. M. Williams).

Hesperia leonardus.—New records are: Meadows of Dan, Patrick County, September 1, 1936 (A. H. and L. F. Clark); Big Meadows, Skyline Drive, August 27, 1933 (A. H. and L. F. Clark); Blacksburg, Montgomery County (E. A. Smyth, Jr.).

Hesperia sessacus.—Unpublished records are: Hayfield, Frederick County, May 17, 1936, common (A. H. and L. F. Clark); summit of Stony Man mountain, Page County, May 24, 1936 (A. H. and L. F. Clark); Blacksburg, Montgomery County, variable in abundance (E. A. Smyth, Jr.).

Atrytonopsis hianna.—New records for the State are: Clifton Forge, Alleghany County, May 12, 1936 (C. C. Walton); Warrenton, Fauquier County, May 24, 1936, frequent (A. H. and L. F. Clark); Richmond, Henrico County, May 12, 1936 (C. M. Williams); Glebe, Westmoreland County, May 31, 1936 (W. H. Wagner).

Atrytone logan.—New records are: South of Zuni, Isle of Wight County, August 20, 24, 1936 (C. M. Williams); north of Walters, Isle of Wight

County, August 22, 1936 (C. M. Williams); Clifton Forge, Alleghany County, July 26, 1936 (C. C. Walton).

Poanes viator.—Found in great abundance near Port Richmond, King William County, on June 7, 1936 (A. H. and L. F. Clark).

Amblyscirtes carolina.—This little skipper has approximately the same range within the State as *Enodia creola*. Unpublished records are: New Bohemia, Prince George County, June 22, 1936 (W. H. Wagner); Emporia, Greensville County, September 3, 1936 (A. H. and L. F. Clark); Cypress Bridge, July 23, 1936 (C. M. Williams).

Panoquina panoquin.—New records for this salt marsh skipper are: New Point, Mathews County, August 23, 1936 (A. H. and L. F. Clark); Lynnhaven, Princess Anne County, September 5, 1936, abundant (A. H. and L. F. Clark).

ANTHROPOLOGY.—*The finding of two ossuaries on the site of the Indian village of Nacotchtanke (Anacostia).*¹ T. D. STEWART and W. R. WEDEL, U. S. National Museum.

When Capt. John Smith ascended the Potomac river in 1608 he described an Indian village extending some distance along the eastern bank of a large tributary entering from the east near the head of navigation. To this village, "with 80 able men," Smith gave the name "Nacotchtanke" (Arber). Later the missionaries, who arrived on the Potomac in 1634, latinized this name to Anacostan (Tooker), whence is derived the present name of the river and city—Anacostia. Except for references to trade relations and skirmishes, both with the English and neighboring tribes, this village figures very little more in written history. The date of its abandonment is not certain, but it was probably during the middle or latter part of the seventeenth century. The Potomac region in general was abandoned by the Indians about 1700, according to Mooney.

There is some question as to the tribal affiliation of the inhabitants of Nacotchtanke. Mooney (map, pl. VII) considers them Algonkins and includes them in the Powhatan Confederacy, but notes that they received Smith peacefully, thus disobeying Powhatan's orders. According to the Handbook of American Indians, Shea considers this group Iroquoian.

In substantiation of the historical record regarding the location of Nacotchtanke are the reports of local collectors. In 1889 Proudfit stated (pp. 242-243):

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